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Sequence Listing was accepted.
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Reviewer: Anne Corrigan
Timestamp: [year=2010; month=9; day=24; hr=13; min=40; sec=31; ms=641;]
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Validated By CRFValidator v 1.0.3

Application No: 10582654 Version No: 3.0

Input Set:

Output Set:

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Finished: 2010-09-21 15:38:34.678
Elapsed: 0 hr(s) 0 min(s) 3 sec(s) 39 ms
Total Warnings: 53
Total Errors: 0
No. of SeqIDs Defined: 53
Actual SeqID Count: 53

Error code		Error Description
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W	213	Artificial or Unknown found in <213> in SEQ ID (2)
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Input Set:

Output Set:

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Total Warnings: 53
Total Errors: 0
No. of SeqIDs Defined: 53
Actual SeqID Count: 53

Error code	Error Description

This error has occured more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Ono et al.

<120> Modified antibodies recognizing receptor trimers or higher multimers

<130> 75996-01

<140> 10582654
<141> 2010-09-21

<150> PCT/JP2004/018507
<151> 2004-12-10

<150> JP 2003-415735
<151> 2003-12-12

<160> 53

<170> PatentIn version 3.1

<210> 1
<211> 797
<212> DNA
<213> Artificial

<220>
<223> An artificially synthesized nucleotide sequence

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gtccagtgtg aggtacagct gttggagtct gggggaggct tggtacagcc tgggaggtcc 120

ctgagactct cctgtgcagc ctctggattc acctttagca gctatgccat gagctgggtc 180

cgccaggctc cagggaaggg gctggagtgg gtctcagcta ttagtggtag tggtggtagc 240

agatactacg cagactccgt gaagggccgg ttcaccatct ccagagacaa ttccaagaac 300

acgctgtatc tgcaaatgaa cagcctgaga gccgaggaca cggccgtata ttactgtgcg 360

aaagagagca gtggctggtt cggggccttt gactactggg gccagggaac cctggtcacc 420

gtctcctcag gtggagaaat tgtgctgact cagtctccag actttcagtc tgtgactcca 480

aaggagaaag tcaccatcac ctgccgggcc agtcagagca ttggtagtag cttacactgg 540

taccagcaga aaccagatca gtctccaaag ctcctcatca agtatgcttc ccagtccttc 600

tcaggggtcc cctcgaggtt cagtggcagt ggatctggga cagatttcac cctcaccatc 660

aatagcctgg aagctgaaga tgctgcagcg tattactgtc atcagagtag tagtttaccg 720

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<210> 2
<211> 256
<212> PRT
<213> Artificial

<220>
<223> An artificially synthesized peptide sequence

<400> 2
Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
1 5 10 15

Val Gln Cys Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln
20 25 30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35 40 45

Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Arg Tyr Tyr Ala
65 70 75 80

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Lys Glu Ser Ser Gly Trp Phe Gly Ala Phe Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Glu Ile Val
130 135 140

Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys Glu Lys Val
145 150 155 160

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Ser Leu His Trp
165 170 175

Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile Lys Tyr Ala
180 185 190

Ser Gln Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
195 200 205

Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala Glu Asp Ala
210 215 220

Ala Ala Tyr Tyr Cys His Gln Ser Ser Ser Leu Pro Ile Thr Phe Gly
225 230 235 240

```
Gln Gly Thr Arg Leu Glu Ile Lys Asp Tyr Lys Asp Asp Asp Asp Lys
                245                 250                 255
```

<210> 3
<211> 794
<212> DNA
<213> Artificial

<220>
<223> An artificially synthesized nucleotide sequence

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gtccagtgtg aggtacagct gttggagtct gggggaggct tggtacagcc tgggaggtcc 120

ctgagactct cctgtgcagc ctctggattc acctttagca gctatgccat gagctgggtc 180

cgccaggctc agggaaggg gctggagtgg gtctcagcta ttagtggtag tggtggtagc 240

agatactacg cagactccgt gaagggccgg ttcaccatct ccagagacaa ttccaagaac 300

acgctgtatc tgcaaatgaa cagcctgaga gccgaggaca cggccgtata ttactgtgcg 360

aaagagagca gtggctggtt cggggccttt gactactggg gccagggaac cctggtcacc 420

gtctcctcag gtgaaattgt gctgactcag tctccagact ttcagtctgt gactccaaag 480

gagaaagtca ccatcacctg ccgggccagt cagagcattg gtagtagctt acactggtac 540

cagcagaaac cagatcagtc tccaaagctc ctcatcaagt atgcttccca gtccttctca 600

ggggtcccct cgaggttcag tggcagtgga tctgggacag atttcaccct caccatcaat 660

agcctggaag ctgaagatgc tgcagcgtat tactgtcatc agagtagtag tttaccgatc 720

accttcggcc aagggacacg actggagatt aaagactaca aggatgacga cgataagtga 780

taagcggccg caat 794

<210> 4
<211> 255
<212> PRT
<213> Artificial

<220>
<223> An artificially synthesized peptide sequence

<400> 4
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Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
1               5                  10                  15

Val Gln Cys Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln
            20                  25                  30
```

```
Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
        35                  40                  45

Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
    50                  55                  60

Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Arg Tyr Tyr Ala
65                  70                  75                  80

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
                85                  90                  95

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Lys Glu Ser Ser Gly Trp Phe Gly Ala Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Glu Ile Val Leu
    130                 135                 140

Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys Glu Lys Val Thr
145                 150                 155                 160

Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Ser Leu His Trp Tyr
                165                 170                 175

Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile Lys Tyr Ala Ser
            180                 185                 190

Gln Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala Glu Asp Ala Ala
    210                 215                 220

Ala Tyr Tyr Cys His Gln Ser Ser Ser Leu Pro Ile Thr Phe Gly Gln
225                 230                 235                 240

Gly Thr Arg Leu Glu Ile Lys Asp Tyr Lys Asp Asp Asp Asp Lys
                245                 250                 255
```

<210> 5
<211> 791
<212> DNA
<213> Artificial

<220>
<223> An artificially synthesized nucleotide sequence

<400> 5

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gtccagtgtg aggtacagct gttggagtct gggggaggct tggtacagcc tgggaggtcc    120

ctgagactct cctgtgcagc ctctggattc acctttagca gctatgccat gagctgggtc    180
```

cgccaggctc cagggaaggg gctggagtgg gtctcagcta ttagtggtag tggtggtagc 240

agatactacg cagactccgt gaagggccgg ttcaccatct ccagagacaa ttccaagaac 300

acgctgtatc tgcaaatgaa cagcctgaga gccgaggaca cggccgtata ttactgtgcg 360

aaagagagca gtggctggtt cggggccttt gactactggg gccagggaac cctggtcacc 420

gtctcctcag aaattgtgct gactcagtct ccagactttc agtctgtgac tccaaaggag 480

aaagtcacca tcacctgccg ggccagtcag agcattggta gtagcttaca ctggtaccag 540

cagaaaccag atcagtctcc aaagctcctc atcaagtatg cttcccagtc cttctcaggg 600

gtcccctcga ggttcagtgg cagtggatct gggacagatt tcaccctcac catcaatagc 660

ctggaagctg aagatgctgc agcgtattac tgtcatcaga gtagtagttt accgatcacc 720

ttcggccaag ggacacgact ggagattaaa gactacaagg atgacgacga taagtgataa 780

gcggccgcaa t 791

<210> 6
<211> 254
<212> PRT
<213> Artificial

<220>
<223> An artificially synthesized peptide sequence

<400> 6
Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
1 5 10 15

Val Gln Cys Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln
20 25 30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35 40 45

Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Arg Tyr Tyr Ala
65 70 75 80

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Lys Glu Ser Ser Gly Trp Phe Gly Ala Phe Asp Tyr
115 120 125

```
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Glu Ile Val Leu Thr
    130                 135                 140

Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys Glu Lys Val Thr Ile
145                 150                 155                 160

Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Ser Leu His Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile Lys Tyr Ala Ser Gln
            180                 185                 190

Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala Glu Asp Ala Ala Ala
    210                 215                 220

Tyr Tyr Cys His Gln Ser Ser Ser Leu Pro Ile Thr Phe Gly Gln Gly
225                 230                 235                 240

Thr Arg Leu Glu Ile Lys Asp Tyr Lys Asp Asp Asp Asp Lys
                245                 250
```

<210> 7
<211> 1538
<212> DNA
<213> Artificial

<220>
<223> An artificially synthesized nucleotide sequence

<400> 7

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ctgagactct cctgtgcagc ctctggattc acctttagca gctatgccat gagctgggtc    180

cgccaggctc agggaaggg gctggagtgg gtctcagcta ttagtggtag tggtggtagc    240

agatactacg cagactccgt gaagggccgg ttcaccatct ccagagacaa ttccaagaac    300

acgctgtatc tgcaaatgaa cagcctgaga gccgaggaca cggccgtata ttactgtgcg    360

aaagagagca gtggctggtt cggggccttt gactactggg gccagggaac cctggtcacc    420

gtctcctcag gtggaggcgg atcggaaatt gtgctgactc agtctccaga ctttcagtct    480

gtgactccaa aggagaaagt caccatcacc tgccgggcca gtcagagcat tggtagtagc    540

ttacactggt accagcagaa accagatcag tctccaaagc tcctcatcaa gtatgcttcc    600

cagtccttct caggggtccc ctcgaggttc agtggcagtg gatctgggac agatttcacc    660

ctcaccatca atagcctgga agctgaagat gctgcagcgt attactgtca tcagagtagt    720
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agtttaccga tcaccttcgg ccaagggaca cgactggaga ttaaaagagc tgatgctgca 780

gctgcaggag gtcccgggtc cgaggtacag ctgttggagt ctgggggagg cttggtacag 840

cctgggaggt ccctgagact ctcctgtgca gcctctggat tcacctttag cagctatgcc 900

atgagctggg tccgccaggc tccagggaag gggctggagt gggtctcagc tattagtggt 960

agtggtggta gcagatacta cgcagactcc gtgaagggcc ggttcaccat ctccagagac 1020

aattccaaga acacgctgta tctgcaaatg aacagcctga gagccgagga cacggccgta 1080

tattactgtg cgaaagagag cagtggctgg ttcggggcct ttgactactg gggccaggga 1140

accctggtca ccgtctcctc aggtggaggc ggatcggaaa ttgtgctgac tcagtctcca 1200

gactttcagt ctgtgactcc aaaggagaaa gtcaccatca cctgccgggc cagtcagagc 1260

attggtagta gcttacactg gtaccagcag aaaccagatc agtctccaaa gctcctcatc 1320

aagtatgctt cccagtcctt ctcaggggtc ccctcgaggt tcagtggcag tggatctggg 1380

acagatttca ccctcaccat caatagcctg gaagctgaag atgctgcagc gtattactgt 1440

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tacaaggatg acgacgataa gtgataagcg gccgcaat 1538

<210> 8
<211> 503
<212> PRT
<213> Artificial

<220>
<223> An artificially synthesized peptide sequence

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1 5 10 15

Val Gln Cys Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln
20 25 30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35 40 45

Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Arg Tyr Tyr Ala
65 70 75 80

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

```
Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Lys Glu Ser Ser Gly Trp Phe Gly Ala Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
145                 150                 155                 160

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Ser
                165                 170                 175

Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile
            180                 185                 190

Lys Tyr Ala Ser Gln Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly
        195                 200                 205

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala
    210                 215                 220

Glu Asp Ala Ala Ala Tyr Tyr Cys His Gln Ser Ser Ser Leu Pro Ile
225                 230                 235                 240

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg Ala Asp Ala Ala
                245                 250                 255

Ala Ala Gly Gly Pro Gly Ser Glu Val Gln Leu Leu Glu Ser Gly Gly
            260                 265                 270

Gly Leu Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser
        275                 280                 285

Gly Phe Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro
    290                 295                 300

Gly Lys Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser
305                 310                 315                 320

Arg Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
                325                 330                 335

Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
            340                 345                 350

Asp Thr Ala Val Tyr Tyr Cys Ala Lys Glu Ser Ser Gly Trp Phe Gly
        355                 360                 365

Ala Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
    370                 375                 380

Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser
385                 390                 395                 400
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```
Val Thr Pro Lys Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser
                405                 410                 415

Ile Gly Ser Ser Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro
            420                 425                 430

Lys Leu Leu Ile Lys Tyr Ala Ser Gln Ser Phe Ser Gly Val Pro Ser
        435                 440                 445

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn
    450                 455                 460

Ser Leu Glu Ala Glu Asp Ala Ala Ala Tyr Tyr Cys His Gln Ser Ser
465                 470                 475                 480

Ser Leu Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Asp
                485                 490                 495

Tyr Lys Asp Asp Asp Asp Lys
            500
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<210> 9
<211> 15
<212> DNA
<213> Artificial

<220>
<223> An artificial sequence encoding linker sequence

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<210> 10
<211> 5
<212> PRT
<213> Artificial

<220>
<223> An artificially synthesized linker sequence

<400> 10
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Gly Gly Gly Gly Ser
1               5
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<210> 11
<211> 24
<212> DNA
<213> Artificial

<220>
<223> An artificial sequence encoding flag tag sequence

<400> 11
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